

IN THE CLAIMS:

Please amend the claims as follows:

1. (currently amended) A method of filtering a speech signal, ~~the method involving the steps of comprising:~~ providing a filter suited for reduction of distortion, including quantization noise, caused by speech coding; estimating background acoustic noise in said speech signal; adapting said filter in response to the estimated background acoustic noise to obtain an adapted filter; and applying said adapted filter to said speech signal so as to reduce background acoustic noise and to reduce distortion, including quantization noise, caused by speech coding in said speech signal.
2. (currently amended) The method as defined in claim 1, wherein said ~~step of~~ adapting said filter involves adjusting filter coefficients of said filter.
3. (currently amended) The method as defined in claim 2, wherein said ~~steps of~~ estimating, adapting and applying are performed for portions of said speech signal which contain speech as well as for portions which do not contain speech.
4. (previously presented) The method as defined in claim 2, wherein said filter includes a short-term filter function designed for attenuation between spectrum formant peaks of said speech signal and wherein said filter coefficients include at least one coefficient that controls the frequency response of said short-term filter function.
5. (previously presented) The method as defined in claim 4, wherein said filter includes a spectrum tilt compensation function and wherein said filter coefficients include at least one coefficient that controls said spectrum tilt compensation function.
6. (currently amended) The method as defined in claim 1, wherein background acoustic noise in said speech signal is estimated as relative noise energy (~~SNR~~) and noise spectrum tilt.

7. (currently amended) The method as defined in claim 2, wherein said ~~step of~~ adapting is performed by selecting values for said filter coefficients from a lookup table, which maps a plurality of values of estimated background acoustic noise to a plurality of filter coefficient values.

8. (currently amended) The method as defined in claim 1, wherein said ~~steps of~~ estimating, adapting and applying are performed after a ~~step of~~ decoding said speech signal.

9. (currently amended) The method as defined in claim 1, wherein said ~~steps of~~ estimating, adapting and applying are performed before a ~~step of~~ encoding said speech signal.

10. (currently amended) The method as defined in claim 1, wherein said speech signal comprises speech frames and wherein said ~~steps of~~ estimating, adapting and applying are performed on a frame-by-frame basis.

11. (currently amended) The method as defined in claim 7, further comprising the ~~initial steps of~~ initially generating said lookup table by: adding different artificial noise power spectra having given parameter (s) of background acoustic noise to different clean speech power spectra; optimizing a predetermined distortion measure by applying said filter to different combinations of clean speech power spectra and artificial noise power spectra; and for said different combinations, saving in said lookup table those filter coefficient values, for which said predetermined distortion measure is optimal, together with corresponding value (s) of said given parameter (s) of background acoustic noise.

12. (currently amended) The method as defined in claim 11, wherein said predetermined distortion measure includes ~~Spectral Distortion (SD)~~ spectral distortion.

13. (currently amended) The method as defined in claim 11, wherein said given parameters of background acoustic noise include relative noise energy (~~SNR~~) and noise spectrum tilt.

14. (currently amended) The method as defined in claim 10, wherein background acoustic noise in said speech signal is estimated as relative noise energy (~~SNR~~) and noise spectrum tilt, the method further comprising ~~the further steps~~, after said step of estimating background acoustic noise, ~~of deciding whether the estimated relative noise energy for a current speech frame is below a predetermined threshold; and if so, not performing said steps of adapting filter coefficients and applying said filter, and instead per-forming energy attenuation on the current speech frame so as to suppress~~ background acoustic noise in a speech pause.

15. (currently amended) An ~~electronic apparatus having a speech filtering device for a speech signal, the speech filtering device comprising:~~

a filter ~~suited~~configured for reduction of distortion, including quantization noise, caused by speech coding of a speech signal;

~~means~~a noise estimator for estimating background acoustic noise in said speech signal; and

~~means~~a postfilter controller for adapting said filter in response to the estimated background acoustic noise, wherein said filter, when applied to said speech signal, reduces background acoustic noise and reduces distortion, including quantization noise, caused by speech coding in said speech signal.

16. (currently amended) The ~~electronic apparatus~~ as in claim 15, wherein said ~~means~~postfilter controller for adapting said filter is arranged to adjust filter coefficients of said filter in response to the estimated background acoustic noise.

17. (currently amended) The ~~electronic apparatus~~ as in claim 16, wherein said ~~means~~noise estimator for estimating, said ~~means~~postfilter controller for adapting and

said filter are arranged to operate on portions of said speech signal which contain speech as well as on portions which do not contain speech.

18. (currently amended) The ~~electronic~~-apparatus as in claim 16, wherein said filter includes a short-term filter function designed for attenuation between spectrum formant peaks of said speech signal and wherein said filter coefficients include at least one coefficient that controls the frequency response of said short-term filter function.

19. (currently amended) The ~~electronic~~-apparatus as in claim 15, wherein said ~~means~~noise estimator for estimating background acoustic noise is arranged to estimate background acoustic noise ~~it~~-as relative noise energy (SNR)-and noise spectrum tilt.

20. (currently amended) The ~~electronic~~-apparatus as in claim 16, wherein said ~~means~~postfilter controller for adapting said filter comprises a lookup table, which maps a plurality of values of estimated background acoustic noise to a plurality of filter coefficient values.

21. (currently amended) The ~~electronic~~-apparatus as in claim 15, wherein said speech signal comprises speech frames and wherein said ~~means~~noise estimator for estimating, said ~~means~~postfilter controller for adapting and said filter are arranged to operate on said speech signal on a frame-by-frame basis.

22. (cancelled)

23. (cancelled)

24. (cancelled)

25. (cancelled)

26. (currently amended) A computer program product ~~directly loadable into a memory of a processor, where the computer program product comprises~~readable medium storing program code for performing the method according to claim 1 when executed execution by said a processor for providing a filter suited for reduction of distortion, including quantization noise, caused by speech coding; estimating background acoustic noise in said speech signal; adapting said filter in response to the estimated background acoustic noise to obtain an adapted filter; and applying said adapted filter to said speech signal so as to reduce background acoustic noise and to reduce distortion, including quantization noise, caused by speech coding in said speech signal.

27. (cancelled)

28. (cancelled)

29. (cancelled)

30. (cancelled)

31. (cancelled)

32. (new) An apparatus comprising:

a filter configured for reduction of distortion, including quantization noise, caused by speech coding of a speech signal;

means for estimating background acoustic noise in said speech signal; and

means for adapting said filter in response to the estimated background acoustic noise, wherein said filter, when applied to said speech signal, reduces background acoustic noise and reduces distortion, including quantization noise, caused by speech coding in said speech signal.